



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
PO Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09:929,287	08/15/2001	Konrad Roman Weber	839-1082	8196

7590

08/15/2003

NIXON & VANDERHYTE P.C.
8th Floor
1100 North Glebe Road
Arlington, VA 22201

EXAMINER

WAKS, JOSEPH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 08/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,287

Applicant(s)

WEEBER ET AL.

Examiner

Joseph Waks

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-23 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 02 June 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 3-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 8-9, "said rotor being impervious to said cooling gas" is vague and indefinite since it is not clear with what respect the rotor is impervious to the cooling gas. In this particular case the rotor outside surface is in direct contact with the flowing gas and heat exchange that occurs in that area contradicts the recited limitation.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, and 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Semba et al. (US 6,201,323) in view of Laskaris et al. (US 5,548,168).

Semba et al. disclose in Figure 2 a rotor 6, a stator 2 around the rotor and separated from the rotor by an annular gap 5 between the rotor and an inner surface of the stator, the stator ventilation system injecting cooling gas into the stator wherein the cooling gas flows through the stator and exits the stator at the annular gap, the baffle chambers mounted on the outer periphery

Art Unit: 2834

of the stator with heat exchangers 13, 13a, and/or 13b mounted on. However, do not disclose the rotor being coupled to the rotor cooling system, wherein the rotor is cooled by a rotor cooling fluid passing through the rotor, wherein said rotor being impervious to said cooling gas.

Laskaris et al. disclose a rotor 10 for retrofitting to a conventional generator by replacing the conventional rotor with a superconducting one, the rotor being coupled to the rotor cooling system 78 and cooled by a rotor cooling fluid passing through the rotor, the rotor being impervious to the cooling gas for the purpose of maintaining the superconducting armature at the required operating temperature.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the machine as taught by Semba et al. and to provide the rotor to the rotor cooling system and cooled by a rotor cooling fluid passing through the rotor as taught by Laskaris et al. for the purpose of increasing the efficiency of the generator by retrofitting it with a superconducting rotor.

Re claim 10, it would have been further obvious to provide an open loop air cooled system for a smaller dynamoelectric machine for the purpose of reducing the cost of the system by eliminating heat exchange system, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Allowable Subject Matter

5. Claims 11-23 are allowed.

The feature of the baffle chambers including the first chamber having the outer cooling gas inlet port open to a source of cooling gas and the second chamber having cooling gas inlet

Art Unit: 2834

port open to the first chamber in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Response to Arguments

6. Applicant's arguments filed on June 2, 2003 have been fully considered but they are not persuasive.

Re 35 USC 112 second paragraph. The Webster's definition of impervious clearly includes not allowing passage through which could be for example passage of heat through a barrier or a wall. Also, the 1984 issue of Webster's II New Riverside University defines impervious also as incapable of being affected. Therefore, examiners objection to the claim's indefinite language is appropriate.

Re 35 USC 103. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this particular case Semba et al. disclose the stator cooling system as claimed. The rotor disclosed by Semba et al. is a non-superconducting core rotor cooled by the gas flowing through the gap between the rotor and stator without penetrating the rotor itself (or in other words solid rotor described by Laskaris et al. in column 1, lines 11-14). Laskaris et al. disclose the superconducting rotor for retrofitting to a conventional generator by replacing the conventional rotor with a superconducting one (Re column 2, lines 28-31). The superconducting rotor disclosed by Laskaris et al. is coupled to the rotor cooling system and cooled by a rotor cooling fluid passing through the rotor, a feature inherent to the superconducting type rotors. The motivation for such

Art Unit: 2834

retrofit is to replace the non-superconductive motor with the highly efficient superconducting rotor. In combination, Semba et al. and Laskaris et al. disclose the invention as claimed.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Art Unit: 2834

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
August 12, 2003